

ABSTRACT

The present invention provides a method of identifying a tagged item which involves recovering from the item a nucleic acid containing taggant sample potentially containing one or more target nucleic acids. A detection unit is
5 provided having multiple electrically separated electrical conductor pairs. Each conductor pair has an attached capture probe such that a gap exists between the capture probes of a pair of electrically separated conductors, and the capture probes for each pair of conductors are complementary to one of the target nucleic acids. The sample is contacted with the detection unit under conditions effective
10 to permit any target nucleic acid in the sample to bind to the capture probes, thereby connecting the capture probes. Target nucleic acid in the sample is detected by determining whether electricity is conducted between the electrically separated conductors. Also provided is a kit for identification of a nucleic acid taggant on an item.